

PROCEEDINGS  
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SOME WESTERN MILLIPEDS OF THE FAMILY  
CHELODESMIDAE

BY RALPH V. CHAMBERLIN

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The notes and diagnoses recorded in the present paper are based upon material in the author's collection at the University of Utah where the types of the new forms are for the present retained.

Genus CHONAPHE Cook, 1904

Orthotype: *Chonaphe armata* (Harger)

The type species has been the only one heretofore known for *Chonaphe* as here restricted by removal of *Chonaphe elrodi* Chamberlin to a new genus. Three new species are here added.

*Chonaphe armata* (Harger)

*Polydesmus armatus* Harger, 1872, Amer. Jour. Sci. and Arts, 4:120.

*Chonaphe armata* Cook, 1904. Harriman Alaska Exped., 8(1):56;

\*2a-2c ?—*Polydesmus erucs* Wood, 1865, Trans. Amer. Phil. Soc., 13:27

? *Chonaphe eruca* Cook, 1904, Harriman Alaska Exped., 8(1):57.

Type locality: Oregon.

The form illustrated by Cook may be accepted as the true *armata*. Since *eruca* Wood was based upon a female only, it is doubtful whether it can ever be identified with certainty even as to its genus in the absence of any type specimen.

*Chonaphe cygnea* new Species

Fig. 1

Dorsum approximately chestnut in color, with the keels yellow. Legs light brown, the distal articles darkest. Antennae brown.

From *remissa* differing in the general outline of the anterior lamina of the gonopods, in the details of the distal end of that lamina, and in the much larger lamina or fold on the anterior face. See further fig. 1.

Width, 4.7 mm.

Type locality: Washington: White Swan. One male taken May 7, 1933, by Wm. W. Baker.

This is a notably smaller form than *C. patriotica*.

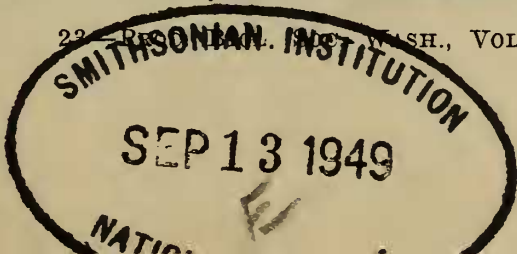
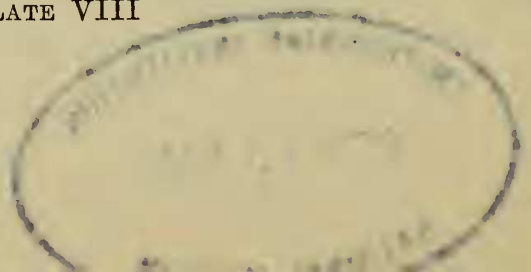




PLATE VIII



*Chonaphe patriotica* new species

Figs. 2 and 3

Prozonites chestnut above; metazonites chestnut to black, the keels in preserved specimens yellow. Legs and antennae dark brown to chestnut.

The gonopods are of the same general structure as in *armata* but differ in details, especially those of the terminal portion of the anterior lamina as shown in figs. 2 and 3.

Length, about 32 mm.; width, up to 6.5 mm.

Type locality: Idaho: Fourth of July Canyon. Males and females taken Aug. 12, 1929, by Edith S. and R. V. Chamberlin.

*Chonaphe remissa* new species

Figs. 4 and 5

Dorsum dark chestnut, in part blackish; keels yellow, probably faded from orange, excepting the anterior and posterior borders which are dark, the dark band of posterior border narrow. Legs lighter chestnut, the antennae somewhat darker.

A smaller form than *C. patriotica* from which it differs also in the details of the gonopods, especially those of the anterior lamella, as, e.g., form and small size of the lobe on its anterior face. The general outline of the anterior branch is also obviously different from that of *patriotica* and *armata*. See further figs. 4 and 5.

Width, 5.3 mm.

Type locality: Washington: Puyallup. Male holotype taken by Wm. W. Baker.

Genus **MONTAPHE** new

Related to *Chonaphe* in having the gonopods much longer and more exposed than in *Harpaphe*. Differing from *Chonaphe* in having the anterior branch of the gonopods slender and bearing short, uncate processes distally, instead of being conspicuously laminate-cristate.

Orthotype: *Montaphe elrodi* (Chamberlin).

*Montaphe elrodi* (Chamberlin)

*Leptodesmus (Chonaphe) elrodi* Chamberlin, 1913, *Canad. Entomologist*, p. 24; \*17.

Type locality: Montana: Flathead Lake.

Genus **HARPAPHE** Cook, 1904

Orthotype: *Harpaphe haydeniana* (Wood).

*Harpaphe haydeniana* (Wood)

*Leptodesmus haydenianus* Wood, 1864, *Proc. Acad. Sci. Phil.*, p. 10; 1865, *Trans. Amer. Phil. Soc.*, 13:226.

*Harpaphe haydenianus* Cook, 1904, *Harriman Alaska Exped.*, 8(1):59; \*3:4a-4c.

Type locality: Oregon.

Other records: Oregon: North fork of Alcea River; Laturell Falls,

Aug. 4, 1929 (Chamberlin coll.); Boyer, Sept. 23, 1937 (J. A. Macnab coll.); Rosy Creek, Pistol River, Aug. 3, 1945 (Ned Chapman coll.). Washington: Quinalt Lake; Issaquah, Aug., 1929 (Chamberlin). British Columbia: Cameron, Sept. 13, 1935 (Chamberlin coll.); Steelhead, 1933 (H. Leach); White Cliff; Metlakatla.

**Harpaphe clara** new species

Figs. 6, 7

Dorsum at present dark brown or chocolate colored, with the keels yellow. Legs light brown.

The posterior blade of the gonopods more strongly curved beyond its middle than in the closely related *H. intaminata*, with the upper, or inner, margin more concave; anterior hook relatively narrower, with the apical portion more slenderly prolonged; median process with distal margin nearly straight instead of convex. See further figs. 6 and 7.

Width, 6.2 mm.

Type locality: California: Santa Clara Co., Stevens Creek. Male holotype taken Apr. 23, 1921, in a rotten log.

Other record: California: Santa Cruz Co., Santa Cruz.

**Harpaphe inlignea** new species

Fig. 8

The color of the type has faded from long preservation. At present the keels are the usual yellowish color and the dorsum elsewhere a light, in part somewhat pinkish, brown.

The posterior blade of the gonopods moderately short, not distally acuminate, the end being blunt or notched as shown in fig. 8. The middle process with distal margin highest at anterior end as shown in the figure.

Width, 6 mm.

Type locality: California: Inwood. One male.

**Harpaphe penulta** new species

Fig. 9

When in full color the dorsum is black, with the keels orange color, but these colors fade in alcohol. Legs and antennae dark brown or chocolate colored.

In contrast with the distal margin of the median hook of the gonopods in, e.g., *haydeniana*, that of the present species, instead of being convex, is truncate or, more commonly, concave as shown in the figure, which see for the other features. (Fig. 9.)

Length, about 32 mm.; width, 5.8 mm.

Type locality: Oregon: 9 miles south of Belnap Springs. Males and females taken July 14, 1946, by S. and D. Mulaik.

Other records: Oregon: McKenzie Bridge, males and females, July 14, 1946 (S. and D. Mulaik); two miles west of Blue River, July 13,

1946 (S. and D. Mulaik), males and females; Lane County, near Vida, June 28, 1941.

*Harpaphe pottera* new species

Fig. 10

General coloration similar to that of related species. The dorsum chocolate brown or mahogany colored, with the keels lemon yellow and the prozonites often contrasting in being lighter colored than the metazonites. Legs brown, and the antennae more chestnut.

Most readily distinguished by the peculiarities of the gonopods, in particular by those of the principal blade which is shorter and less curved than usual and has the distal margin evenly convex. See further fig. 10.

Length, about 45 mm.; Width, 7 mm.

Type locality: California: Potter Creek. Males, females and young individuals taken July 15, 1937, by R. V. Chamberlin.

*Harpaphe telodonta* Chamberlin

Fig. 11

*Paimokia telodonta* Chamberlin, 1945, Bull. Univ. Utah, Biol ser., 8(2):17\*33.

Type locality: California: Humboldt County: Arcata.

Other records: California: 4 miles south of Requa, on the Crescent City road; Prairie Creek Park, Red Wood Fork.

EXPLANATION OF FIGURES

1. *Chonaphe cygnea* n. sp. Left gonopod, anterior view.
2. *Chonaphe patriotica* n. sp. Right gonopod, ectocaudal view.
3. *Chonaphe patriotica* n. sp. Right gonopod, submedian view.
4. *Chonaphe remissa*, n. sp. Right gonopod, subposterior view.
5. *Chonaphe remissa* n. sp. Right gonopod, subanterior view.
6. *Harpaphe clara* n. sp. Telopodite of left gonopod, anterior view.
7. *Harpaphe clara* n. sp. Telopodite of left gonopod, submesal view.
8. *Harpaphe inlignea* n. sp. Right gonopod, mesal view.
9. *Harpaphe penulta* n. sp. Left gonopod, mesal view.
10. *Harpaphe pottera* n. sp. Right gonopod, anterior view.
11. *Harpaphe telodonta* (Chamberlin). Right gonopod, anterior view.